

# TJ PAVARITPONG

Senior undergraduate CS & Stats major with a passion for data science, AI/ML, and backend software engineering  
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## EDUCATION

### University of Illinois Urbana-Champaign

Expected Graduation: Dec 2024

B.S. in Statistics & Computer Science; GPA: 3.52 / 4.00 ; ACT: 34/36

Relevant Coursework: Algorithms, Computer Systems, Database Systems, Numerical Methods, Statistical Modeling, Stochastic Processes, Machine Learning, Programming Languages & Compilers

## WORK EXPERIENCE

### Agoda

Jan 2023 – Jun 2023

Data Engineer Intern

- Migrated 12 Google Ads API report downloader applications across teams, leveraging **Hadoop**, **Spark**, **Hive**, **Scala**, and **GitLab CI/CD** to efficiently process data for the millions of keywords/ad groups
- Optimized algorithm performance, reducing application runtime by a linear factor from **4 hours to 20 minutes**
- **Resolved 2 critical production incidents** caused by incorrect data returned from the Google Ads API
- Created a Slack bot to explain SQL and Spark ETL pipelines to stakeholders using **Python** & **GPT-3**
- Devised & implemented a data validation rule in **SQL** to improve anomaly detection; Backtested using **RStudio**

### Zipmex

Jun 2022 – Jul 2022

Software Engineer Intern (Frontend)

- Contributed to website revamp and light theme release by creating & styling new **React** components to match Figma designs for trading-related pages
- Refactored legacy HTML/CSS code into reusable **React/Material-UI** components to enhance visual consistency and save developer time when making changes
- Wrote test cases and improved type inference using **Jest.js** and **TypeScript** to catch & prevent bugs in codebase

### Central Group

Jun 2019 – Aug 2019

Software Engineer Intern (Mobile)

- Streamlined warehouse processes across **200 service points** by integrating a barcode-scanning library into the employees' mobile app, written in **Ionic** & **Angular**, to enable instant bulk-scanning of shipment labels
- Leveraged Tesseract.js' **optical character recognition (OCR)** to enable product information extraction from receipts and shelf tag verification and correction, saving retail workers' time
- Optimized text recognition of the Thai alphabet and numerals by tuning image-processing settings

## PROJECTS & INVOLVEMENT

### QuantIllinois | Python

Sep 2023 - Present

- Researching & implementing trading strategies for student-run investment fund

### Peer2Pair: Community Finder for Hobbies | React, Node.js, MySQL, Azure, LivePeer

Jan 2023

- Led a beginner hackathon team to create a web app that helps match people with similar interests working towards the same goals. Used LivePeer, a blockchain video broadcasting network, as part of the backend.

### Illini CC'd: Credit Card Recommender | React, Node.js, MySQL, GCP, Material-UI

Sep - Dec 2022

- Led the project and created the whole React front-end UI
- Collaborated with a team to design the database schema, scrape the web for credit card offers and benefits, develop API endpoints, and host the application on Google Cloud Platform

### Blackjack Simulator | C++, Catch2, Cinder

June 2022

- Developed a 2D blackjack simulator designed to train players in optimal strategy

### Openflights Dataset Analyzer | C++, Catch2

May 2022

- Implemented BFS and Dijkstra's algorithm to find the shortest flight itinerary between two airports
- Implemented PageRank to identify the biggest airport hubs in a given region

## SKILLS

**Languages:** Python, R, SQL, C/C++, Scala, JavaScript, HTML/CSS

**Frameworks & Libraries:** Apache Spark, NumPy, PyTorch, React.js, Node.js, Flask

**Other Tools:** Git, Linux/Unix, Docker, Agile/Scrum, GCP, MongoDB,  $\LaTeX$